



# QTS 4 NAS OS





# NAS Redefined

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Intuitive, Simple



# About QNAP

## Mission

QNAP Systems, Inc. aims to deliver comprehensive offerings of cutting edge Network Attached Storage (NAS), Network Video Recorder (NVR) solutions, and network appliances. QNAP contributes to humankind with its technology to prevent users' important files from loss, theft, or destruction by virus; to ensure secure data transmission; and to safeguard digital business assets.

## Core Value

QNAP is devoted to balancing humanity & technology, pursuing innovation, data security, and the user experience. With our high-standard research & development, QNAP delivers high-quality products and features, and offers excellent services to optimize the user experience.



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# What is QTS?

QTS (QNAP Turbo NAS System) is the Turbo NAS Operating System, providing file storage, backup, disaster recovery, security management and virtualization applications for businesses; multimedia applications for home, and many more.

## System Kernel

Based on Linux, QTS is designed to be simple and flexible, and centralizes multiple applications efficiently in the App Center.

## Mobile Apps & Utilities

QTS provides utilities and mobile apps for users to easily enjoy the private cloud service from QNAP NAS and remotely manage and access files on the Turbo NAS with smart phones, tablet devices and computers. Living a digital life of synchronization, browsing and sharing is just that easy.



## Service Layer

Bridging the kernel and application layer.

## Application Layer

The QTS App Center is an open platform that provides 3rd party software applications and thus extends the functionality of the Turbo NAS.

# QTS Desktop Management

Simple and Intuitive





## Main menu

Neatly presenting the enabled applications, system preferences, and any additional apps installed from the App Center to help you find the desired item quickly.



## Smart toolbar

Providing necessary support, including QTS online resources, quick search, event notification, background tasks, and more.



## Multi-tasking design

Allowing you to open multiple windows and run multiple tasks to increase working efficiency.



## Multiple desktops

The unique multiple desktops feature allows you to separate particular applications onto different desktops and switch between the desktops freely.



## Smart dashboard

Graphically presenting system health, HDD health, resource monitoring, hardware information, storage status, scheduled tasks along with news feeds that inform you of the latest product and software information.



## Personalized wall

For desktop and login screen, you can upload your favorite pictures or choose photos in the Photo Station to create a personalized wall to make your own style.



## Group and shortcuts

You can flexibly arrange frequent-used icons on the desktop as shortcuts or group them simply by dragging-and-dropping.



## Easy operations on tablet devices

QTS provides window mode and tab mode. When operating on a tablet device, the mode will automatically switch to tab mode.



# Centralized file storage, management and sharing

QTS provides comprehensive cross-platform file storage and sharing. The web-based management interface of File Station allows you to remotely manage, store and share files via web browser from anywhere.

## Cross-platform access

QTS supports Windows SMB, Mac AFP and Linux NFS protocols to easily access and share files on the Turbo NAS.

QTS supports UPnP and Bonjour protocols that allow zero networking configuration of computers and mobile devices to easily access the Turbo NAS via the network.

## Near/Remote access

QTS provides complete functions for users to access files through mobile devices or web browsers in the Intranet or over the Internet.

## Data security

### Privileges settings

You can create multiple user accounts and shared folders, and authorize each user to different shared folders with the system support of privilege settings and Windows ACL advanced permissions.

### User home folders

With the user "Home Folder" feature turned on, a personal folder will be created automatically when a user logs on to the Turbo NAS for the first time. If effectively saves the time to create personal folders for each individual user.



## File Station

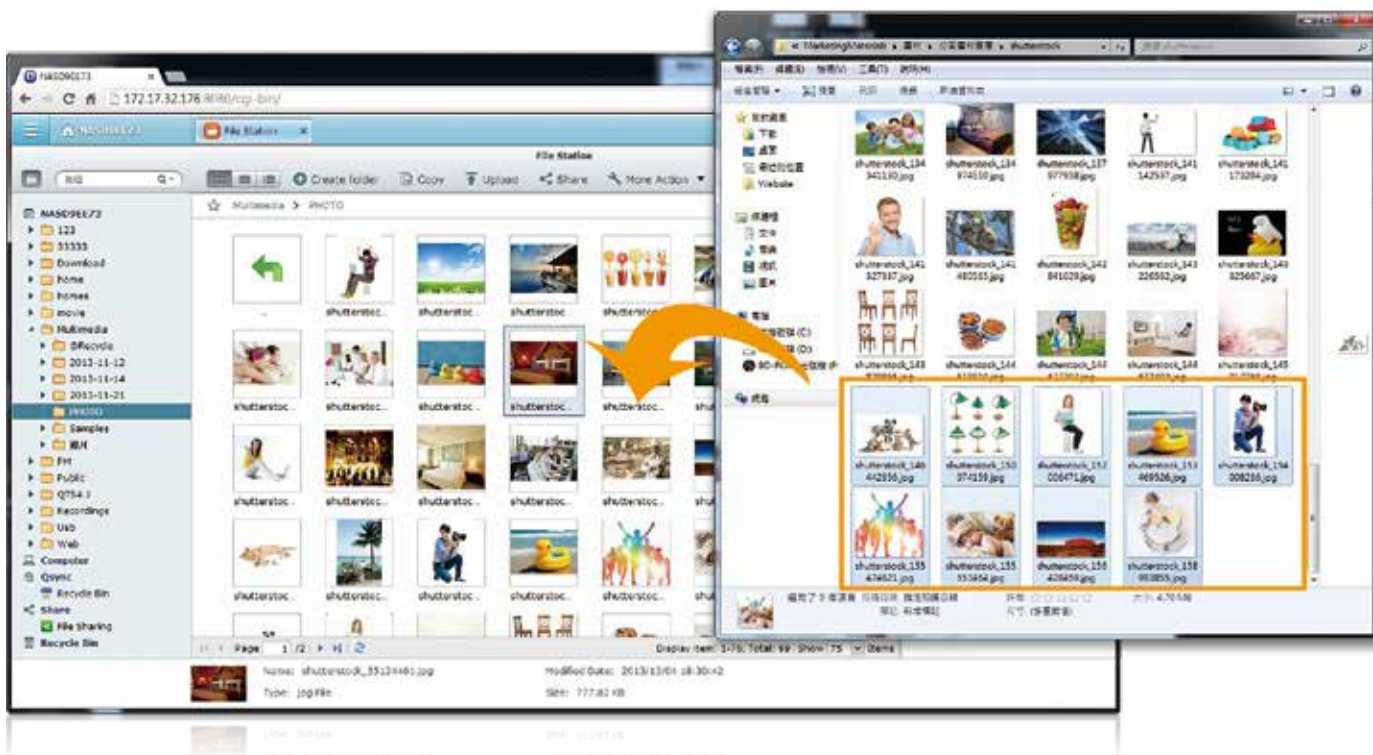
With the File Station, you can easily manage, upload, download, share files, and enjoy media playback anywhere with a web browser. The File Station brings conventional file operations performed on the computer desktop to the web browser.

### File upload

Move files from local PC/Mac to File Station by drag-and-drop to easily upload the files to the Turbo NAS.

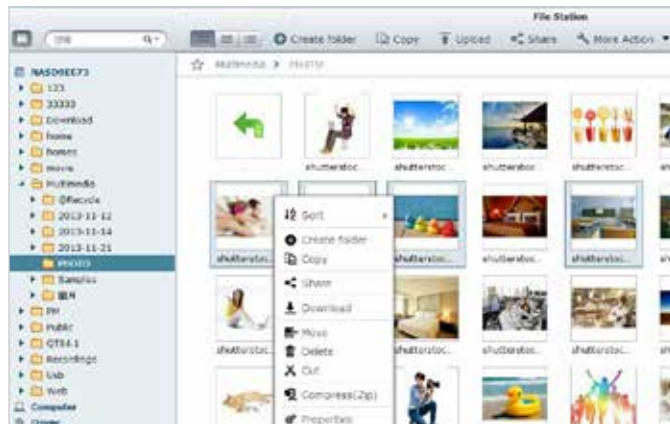
### Mutual file sharing

You can easily share a bunch of files in a shared folder with friends via a Share Link. By activating the file upload function, your friends will be granted the privilege to upload files to your File Station without a user account required. You can even set an expiration time for shared files.



### Managing by right clicking and hot keys

Use mouse right clicking and the keyboard hot keys to rename, move, delete, zip, and unzip files, and even create and delete folders.



### Photo slideshow

Right-click the selected photos to play the slideshow smoothly.



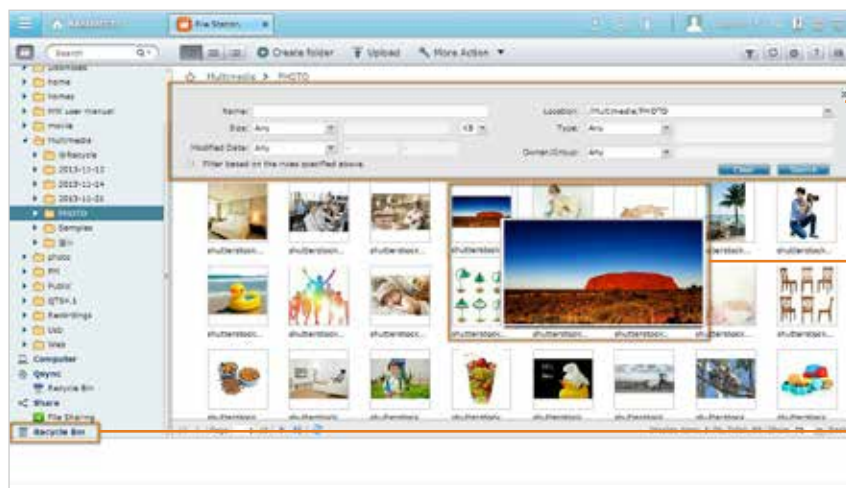
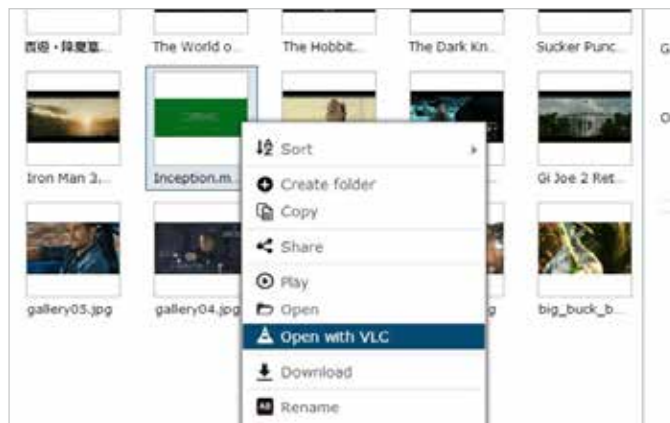
### Media streaming & playing

The File Station supports VLC for multimedia streaming. Just click on your photos, music and videos to directly play the contents. The slideshow display helps gather the media files in an organized manner for you to preview and play.

### Click and play the videos\*

Real-time transcoding allows immediate and smooth video, music, and photo playback. No need to wait for the files to be converted in advanced.

\* Supported by specific Turbo NAS models



### Advanced quick search

The File Station provides smart filters for file searching and browsing by file size, modified date, file name, and so on. The pop-up thumbnails enable you to quickly and clearly preview the files. File browsing is more intuitive and effortless with the File Station.



### Photo thumbnails preview

The File Station shows thumbnails of photos, music and videos, making management easier.



### Recycle bin

The recycle bin helps retrieve files accidentally deleted. It is categorized by shared folders to increase efficiency on file retrieval.



# File Backup/Disaster Recovery

The QTS allows data on PCs, servers, virtual machines, and external drives to be backed up to the Turbo NAS; and provides disaster recovery solutions to back up data on the Turbo NAS to external devices or remote servers.

## Backup Center

### Backup from computer to NAS

#### PC backup

Windows users can install the free QNAP NetBak Replicator utility to back up files from Windows PC - entire disk drives, documents, pictures, music, videos, fonts, emails, and more - to one or multiple Turbo NAS units.

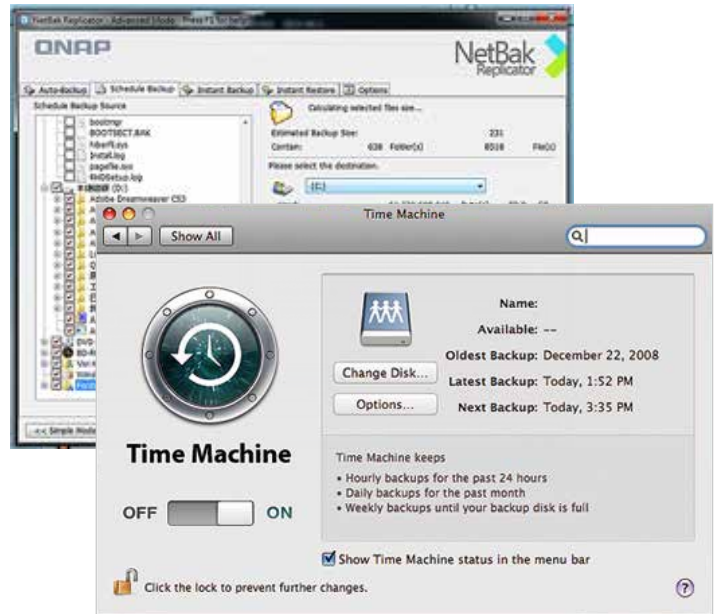
With simple clicks, you can set up real-time backup, scheduled backup and auto-backup. You can set power off after the backup is finished to save energy; file filtering to exclude files not to back up; and email notification when backup is completed.

#### Mac backup

Mac users can use the Mac Time Machine to back up data to the Turbo NAS. You only need to set the Turbo NAS as the backup destination on the Time Machine management page, and it's done.

### 3<sup>rd</sup> party backup software

QTS is compatible with various renowned backup software such as Acronis® True Image, Symantec® Backup Exec, and so on. Users that have adopted such backup software can immediately back up data from other sources to the Turbo NAS.

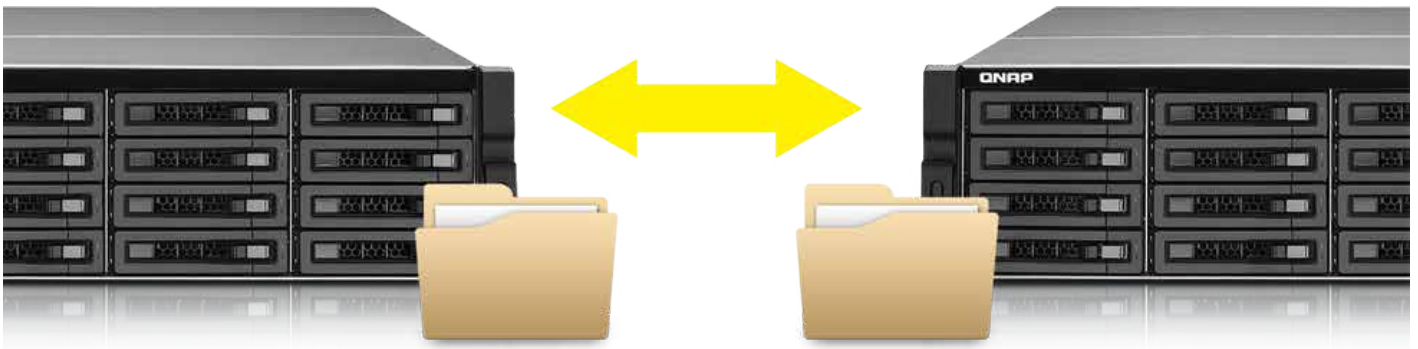


### Backup from server to NAS

Users can use rsync protocol to conduct scheduled backup, or use RTRR (Real-Time Remote Replication) services for real time or scheduled data backup from a remote Turbo NAS or FTP server.

### Virtualization backup server

The Turbo NAS is compatible with VMware® ESX server, Citrix® XenServer, and Microsoft® Hyper-V, able to be seamlessly integrated to a virtualized environment as an extended storage for data backup.



### USB backup

#### One-touch-copy

Connect a USB device such as digital camera, digital camcorder, or USB disk to the front-panel USB port and tap on the "Copy" button to instantly back up data to the Turbo NAS.

#### Smart import

Just connect the digital camera to the USB port on the front of the Turbo NAS, and all the photos and videos will be imported automatically in a newly created folder named "Smart Import".



## Disaster Recovery

### Backup to remote server

- Use rsync protocol to execute scheduled backup to remote rsync server
- Use RTRR (Real-Time Remote Replication) services for real time data backup to a remote Turbo NAS or FTP server.
- Use RTRR to sync shared folders between two Turbo NAS units.

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- Use RTRR to sync shared folders between two Turbo NAS units.

### Backup to cloud storage

Users can back up the data from the Turbo NAS to online cloud storage services, such as Amazon® S3, Amazon Glacier, ElephantDrive®, Windows® Azure, Symform®, Google® Drive, and Dropbox®, and restore the data to your Turbo NAS anytime.

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## Snapshot\*

The QTS Snapshot is a great solution to record the state of files at a particular point of time. You can create up to 1,024 snapshots manually or by schedule on the Turbo NAS. It is easy to retrieve files at a specific time point in case they are broken or mistakenly deleted.



### iSCSI LUN Snapshot

On the Storage Manager, you can take multiple LUN snapshots at different time points. Whenever needed, just promote the LUN snapshot as readable space for easy data retrieval.

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In addition, installing the QNAP VSS Hardware Provider on Windows/Hyper-V will allow Microsoft® Volume Shadow Copy Service (VSS) to initiate the LUN snapshot directly on the Turbo NAS, greatly offloading the computing power of Windows/Hyper-V. Companies that have already adopted backup software such as Acronis® True Image, CA® ARCserve Backup and Symantec® Backup Exec can easily adopt the QNAP solution in their backup infrastructure.

## Volume Snapshot

You can take snapshots of a volume at different time points. Whenever needed, go to the Storage Manager to directly restore or download files by choosing a desired snapshot.

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The volume snapshot supports Windows “Previous Versions”. You can easily retrieve data through Windows Previous Versions in the Windows Explorer (Or File Explorer in Windows 8) even without administrator’s help, enjoying more flexibility.

\* Available in Q1 2014

# Security Management

QTS offers various options for security management to prevent the system from hacking, and data from interception, theft, and loss. QTS security management meets the electronic requirements of HIPAA (Health Insurance Portability and Accountability Act), performing as an ideal storage solution to store medical records.

## Privilege Settings

### Windows AD/ACL

QTS supports Windows AD/ACL to help IT administrators manage user account more effectively, and to simplify the process of privilege settings in large-scale organizations.

Besides, QTS supports SAMBA v4 that enables the Turbo NAS to serve as a Windows domain controller to manage privilege settings.

### LDAP Directory Service

QTS supports LDAP protocol, integrating the Turbo NAS into networks that have deployed an LDAP-based directory service such as OpenLDAP and greatly simplifying the efforts of managing a large amount of user accounts. QTS makes Turbo NAS a LDAP server too.

### Radius Server

QTS RADIUS Server provides centralized authentication and authorization management for computers to connect and use a network service.

QTS RADIUS Server maintains a list of user accounts that are authorized for remote network access through dial-up equipment, Wi-Fi access point, or VPN connections. IT administrators can easily apply access policies to multiple access points for a fine-grained control of network access.



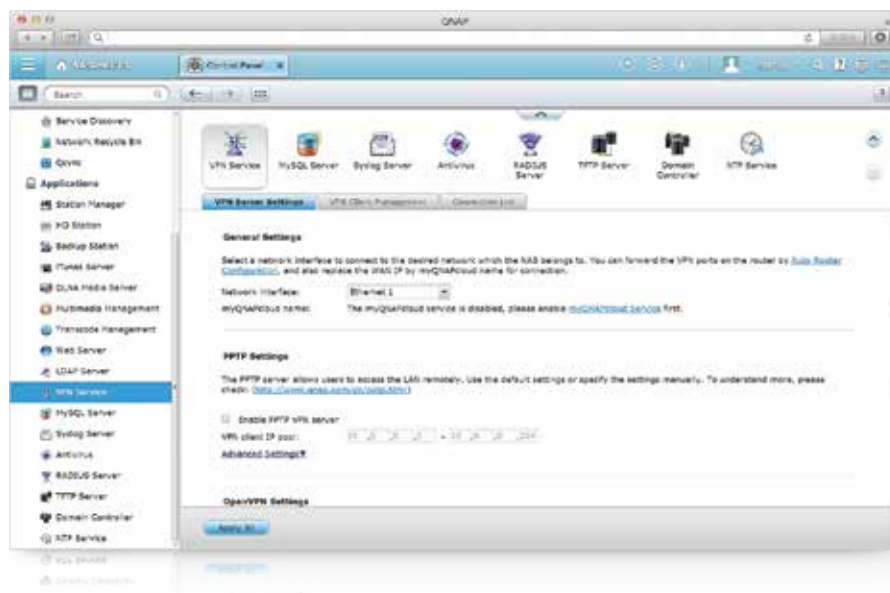
## Anti-interception

### VPN

QTS supports VPN Server, with VPN connections secured with up to 256-bit encryption. It is easy to configure, and is seamless integrated with the QNAP myQNAPcloud service and Auto Router Configuration. Complicated port forwarding settings for PPTP and OpenVPN are therefore simplified.

### Encrypted access

QTS supports SSL, SSH and SFTP for secure connection and data transfer. IT administrators can host websites on the Turbo NAS and only allow access via the HTTPS (SSL over HTTP) secure channel.

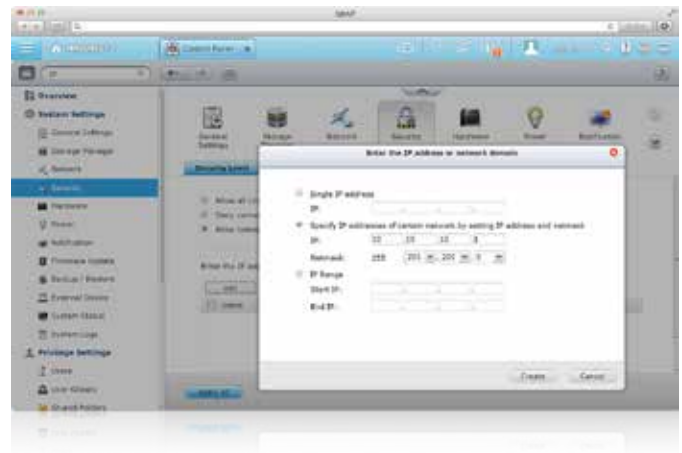




## Anti-hacking

### IP blocking

IT administrators can set up the black or white list to grant the proper access from different users to the Turbo NAS by IP address. It operates as a policy-based automatic IP blocking by enabling the network access protection command.

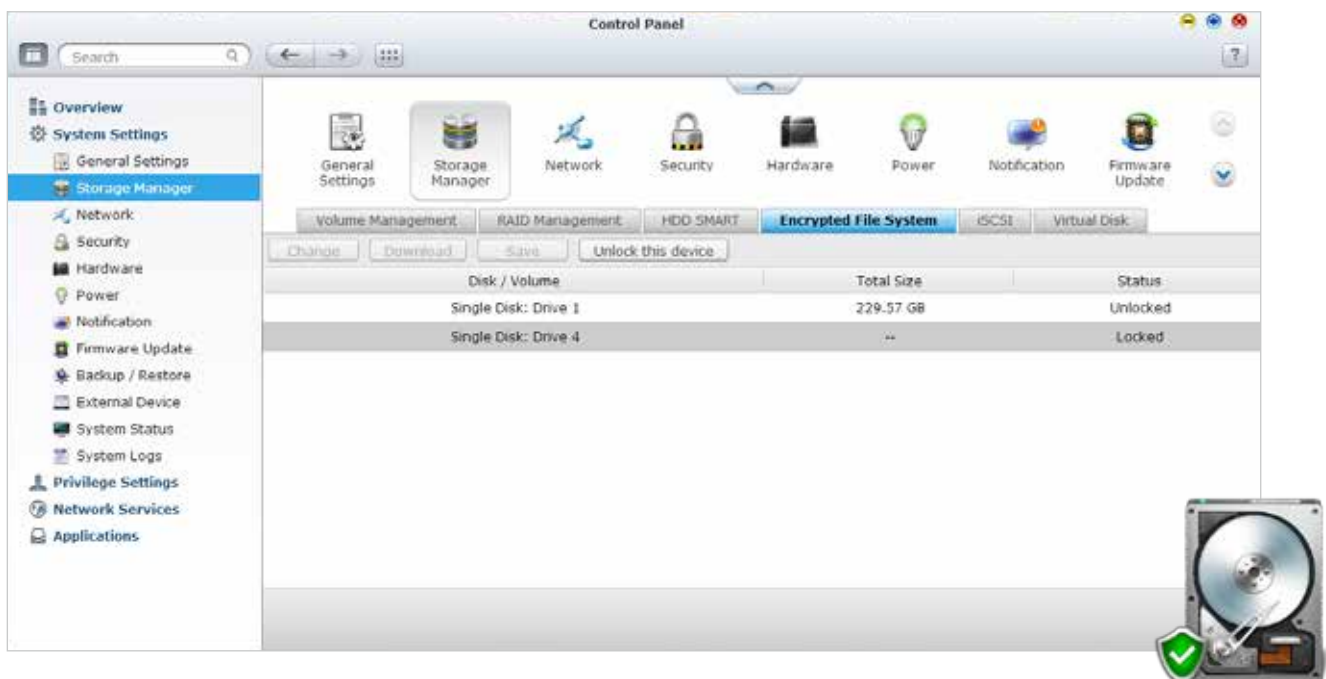


## Anti-theft

### Hard drive encryption

QTS supports up to AES 256-bit encryption for internal drives and external USB/eSATA drives, and adopts a military level FIPS 140-2 validated encryption, which is considered to be the highest security certification for compliance . \*

\* Supported by specific Turbo NAS models.



## Anti-data loss

### Anti-virus

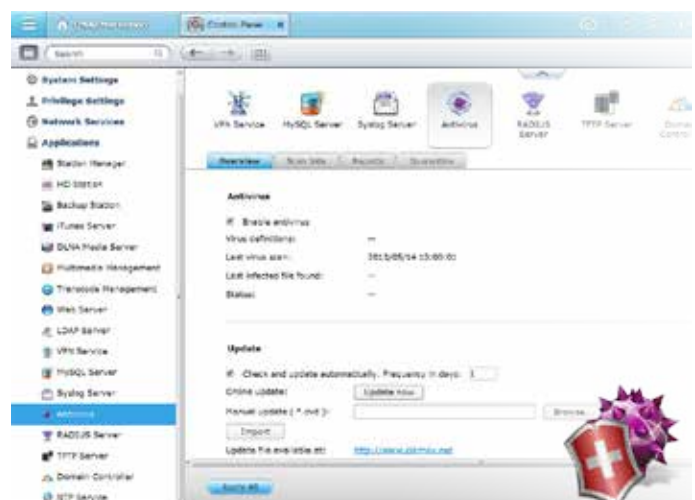
QTS integrates ClamAV antivirus toolkit to detect against the latest viruses, malware, worms, and Trojan horses with continuous free virus database updates, ensuring continuous business operation. An E-mail notification upon task completion or virus detection is provided.

QTS also supports McAfee virus scanner which is available in the QTS App Center with 30-day free trial.

### Advanced RAID storage technology

QTS supports comprehensive RAID types, including RAID 0, 1, 5, 6, 10, 5+hot spare, 6+hot spare, and 10+hot spare configurations, to effectively decrease the possibilities of data loss due to hard drive failure.

QTS Global Hot Spare feature allows RAID group with multiple RAID volumes on a Turbo NAS to share spare drives. When a hard drive fails in any RAID volume, the global hot-spare drive will automatically replace the failed drive to prevent data from being lost.



# Application Server

QTS integrates numerous server functions, including Web Server and Printer Server.



## Web/MySQL Server

QTS supports built-in web server, together with PHP/MySQL support, allowing hosting multiple websites and running famous web applications on the Turbo NAS such as Joomla online shop and phpBB forum.

## FTP Server

Large file sharing

Use FTP high-speed data transfer to increase the efficiency of large file sharing.

Flexible settings

Use anonymous login, read/write, read-only control or bandwidth control to flexibly manage the access right control.

Secure access

Use the safe FTPS (FTP over SSL/TLS) connection to ensure the secure data transmission.

## Printer Server

QTS supports Printer Server, with the support for IPP (Internet Printing Protocol), Samba, print job management, and Bonjour printing on Mac OS X.

By connecting a compatible USB printer to the Turbo NAS, members can instantly share the printer resources over the network at the same time (Max. 3 USB printers).

## VPN Server

Your Turbo NAS can be a VPN Server too. You can share files and any resource with your families and friends via the secured private network, and access websites without the Internet blocking mechanism in certain countries.



“QNAP TS-EC1679U-RP is the key to deliver our readers a much faster browsing speed and better experience on our website.” - Dennis Bode, editor in chief (Germany)

# System Management

QTS has comprehensive system management options to greatly decrease time and cost in IT management. The user-friendly QTS graphic interface is easy to operate and can be done without IT expertise required.

## Hard disk status check

The hard disk S.M.A.R.T. (Self-Monitoring Analysis and Reporting Technology) test and bad block scanning help prevent data loss or damage due to hard disk failure.

## Resource monitor

QTS's graphical interface presents CPU usage, memory usage, disk usage status, bandwidth usage, and running processes of the Turbo NAS to help IT administrators quickly get the status information.



## Alert notification

QTS supports email and SMS alerts notification about system errors, warnings, and alert events.

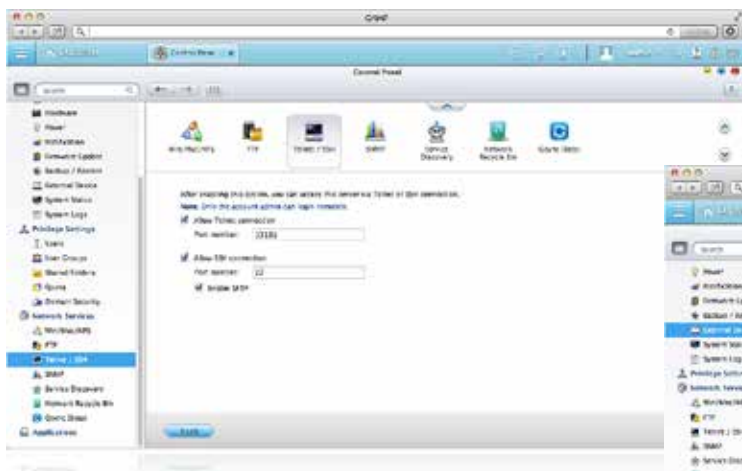
## Comprehensive log system

QTS provides useful system event logs and system connection logs. QTS also supports Syslog Server to conveniently collect logs from other network devices.



## Telnet/SSH

IT administrators can remotely access the Turbo NAS via Telnet or the encrypted Secure Shell (SSH); and execute commands for advanced programming or troubleshooting.



## Network UPS

QTS supports UPS that allows multiple Turbo NAS units on the same TCP/IP network can be protected by a single UPS. The USB/SNMP standalone UPS mode is also supported.



# Storage Management

With QTS storage management coupled with the scale-up solution, businesses can balance the costs and benefits when deploying storage systems for big data storage.



## Scale-up solution

Selected Turbo NAS\* models support QNAP RAID expansion enclosures (REXP series and UX series) to expand the total storage of over 600TB raw capacity. The RAID expansion enclosures support Missing Mode protection to well protect the data.

\* Please visit [www.qnap.com](http://www.qnap.com) for the supported Turbo NAS models

## Proactive data protection

QTS provides enhanced features to secure important business data, including RAID Hot Spare and Global Hot Spare drives, SMART data migration, Time-Limited Error Recovery and Error Recovery Control, and advanced RAID read error recovery technology.

## Flexible volume management

The Storage Pool aggregates multiple RAID groups as a big storage pool to flexibly utilize the storage capacity as a whole. QTS allows creating multiple volumes and block-based iSCSI LUN on the Storage Pool, and supports online capacity expansion, thin-provisioned volume and Space Reclamation, making storage utilization more efficient.

## SSD cache acceleration

SSD cache feature accelerates the IOPS performance and reduces I/O latency for the storage volumes. It also supports hot-swappable SSD and automatically updates the cached data.



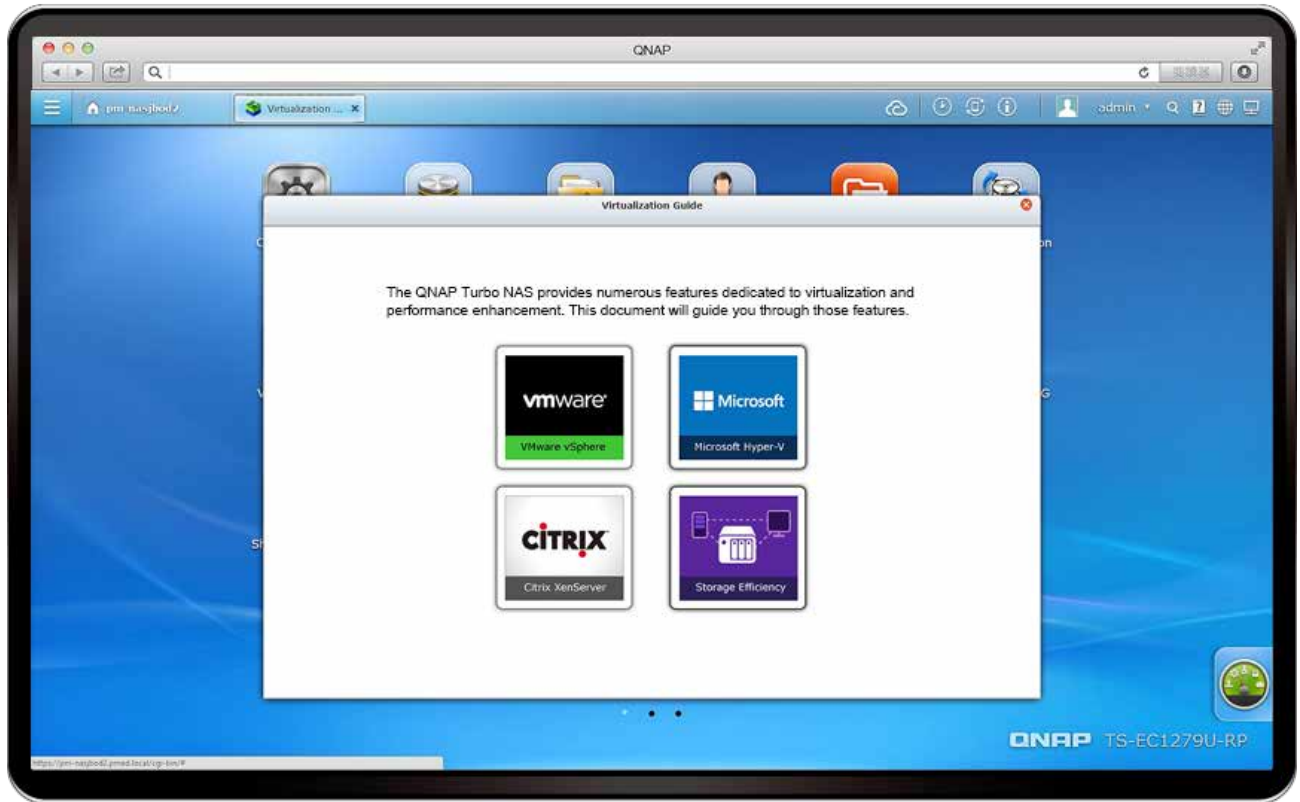
## Expand storage capacity by external drives

You can connect USB or eSATA external drives to the Turbo NAS, and use QTS Storage Manager to manage the newly added space to store or back up data.



# Unified Storage and Virtualization Applications

The Turbo NAS supports iSCSI and NFS protocols, and is virtualization ready - VMware® Ready™, Citrix® Ready™, and Microsoft® Hyper-V™ compatible, to provide businesses with powerful and flexible storage solutions for virtualization applications.



## Virtualization ready

The Turbo NAS supports VMware® Ready™ vSphere 5, VAAI; Citrix® Ready XenServer™ 6.0, and is compatible for Microsoft® Hyper-V, supporting ODX and Windows Server 2012.

## Secure and flexible storage utilization

The Turbo NAS offers flexible management through creating and allocating iSCSI LUNs (Logical Unit Numbers), mapping and un-mapping LUNs to and from the iSCSI targets, and thin provisioning function. The support of CHAP authentication and LUN masking reinforces secured deployment in virtualization applications.

## VAAI/Hyper-V Plug-in Support

Use the free QNAP vSphere Client plug-in and QNAP SMI-S provider for SCVMM. Managing the Turbo NAS from the virtualization management client console is easy.

## NAS/IP SAN unified storage

QTS supports NFS and iSCSI/IP-SAN storage solution that can be utilized as a network shared storage of the virtualization environments. It helps achieve efficient cost-saving, energy-saving and utilization of storage capacity.

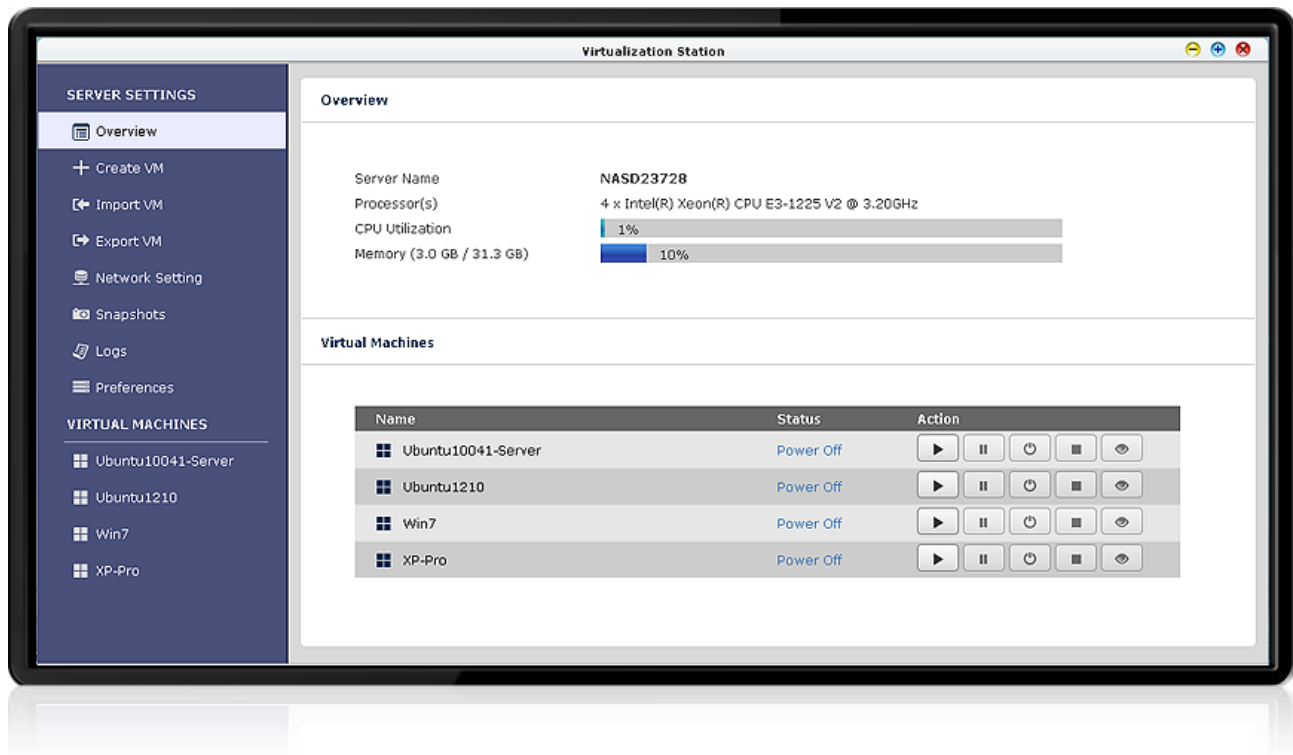


"We're glad that we have reached a balance of performance and budget by upgrading to the QNAP Turbo NAS." - Mr. Toyama, manager of the information media center at Kaetsu University (Japan)



# Virtualization Station

With Virtualization Station, it is effortless to create multiple virtual machines on the Turbo NAS and manage them centrally with the easy-to-use interface, helping businesses save more and work faster in IT management.



## Multiple OS support

With the Virtualization Station, you can create multiple virtual machines to run various operating systems such as Windows, Linux, and UNIX on the Turbo NAS, and separate network resources for each virtual machine to ensure uninterrupted network traffic.

## Operate VMs as Remote Desktops

Enjoy utmost convenience by operating Windows, Linux and UNIX-based VMs as remote desktops. A list of buttons is provided on the left side of each individual VM display, allowing users to suspend, shutdown, force shutdown, reset, bring up key combinations (incl. Ctrl+Alt+Del) & function keys, and even take snapshots for the VMs.

## Fast virtual machine creation

The Virtualization Station provides several default templates for quickly choosing a proper one to create a virtual machine. Advanced users can create custom templates, or manually create a virtual machine without choosing from the templates.

## Virtual machine import/export

Virtual machines of various formats can be easily import to and export from the Virtualization Station with simple steps. IT administrators will enjoy extreme flexibility in arranging IT resources across machines.

## Snapshot

The Virtualization Station provides snapshot feature to record the virtual machine system status at a point of time. At the event of virtual machine failure, users can quickly roll it back to the snapshot time to ensure continual system operation.

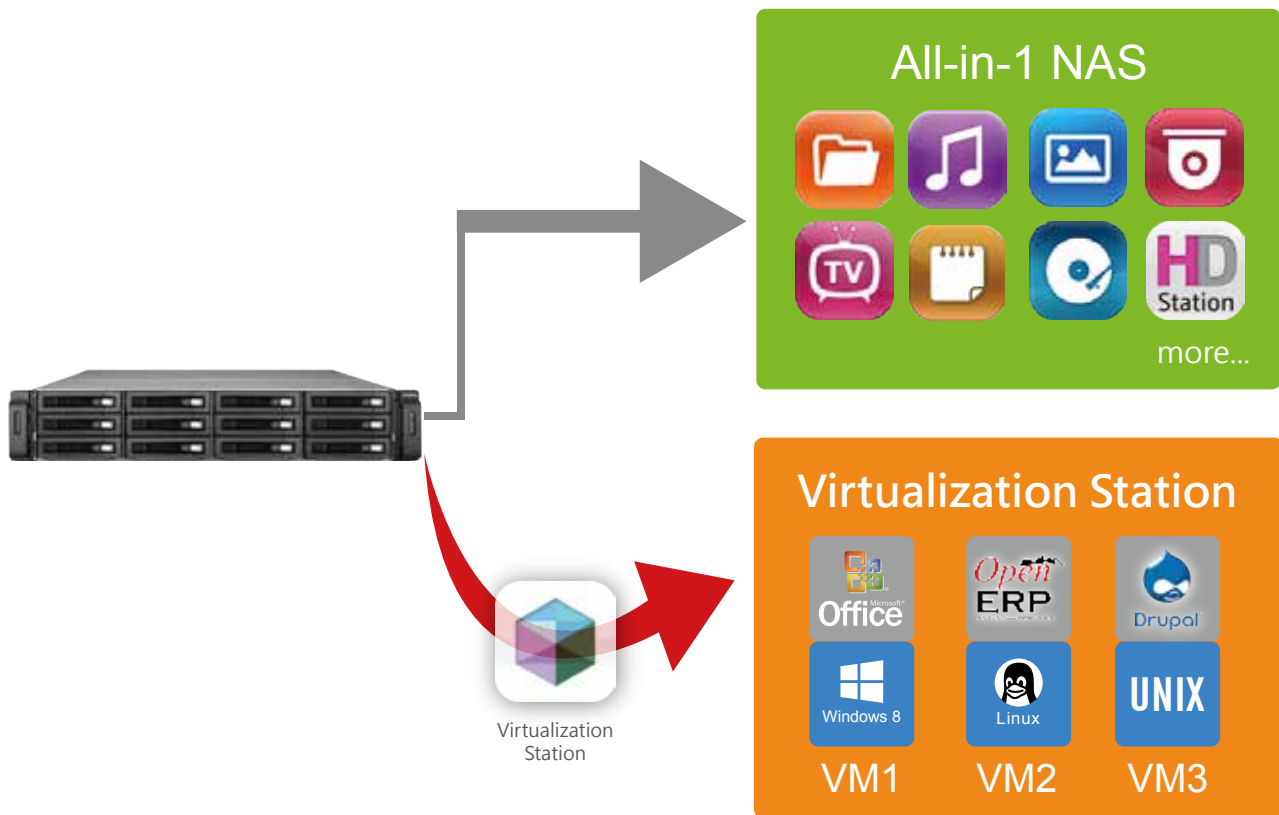
## Energy-saving & Eco-friendly

With the Virtualization Station, you no longer need to purchase a computer or server just to run a single OS, meaning the electricity bills spent on the hardware and even air-conditioning are all saved.

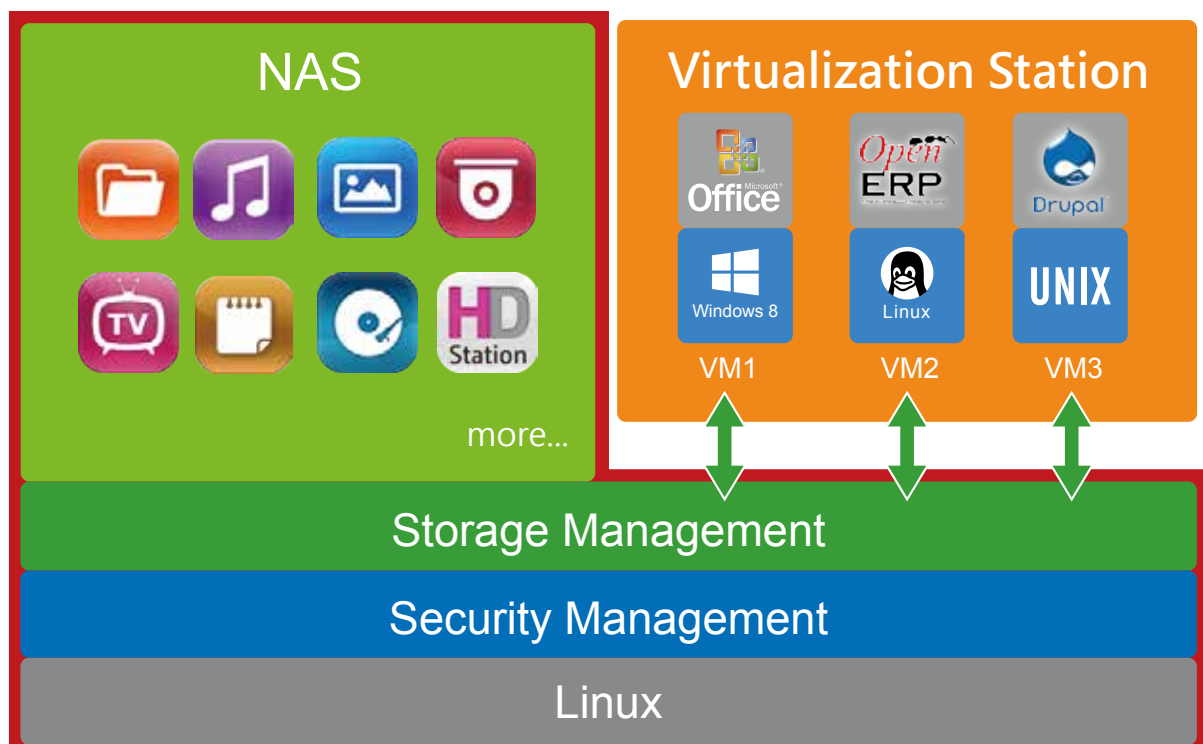


## 2-in-a-box Platform

The Virtualization Station transforms the Turbo NAS into a 2-in-a-box NAS that can function as an all-in-one NAS and a virtualization system.



## System Architecture



# Cloud storage and access

Use the Turbo NAS and myQNAPcloud to create a private cloud or personal cloud to store business documents, personal photos and videos, access the contents anytime & anywhere, and share via various devices.

## myQNAPcloud connection

It's so easy to create your personal cloud or private cloud. With the myQNAPcloud service, you can always enjoy the Turbo NAS services safely and conveniently.

### myQNAPcloud ID (QID)

Access your Turbo NAS by signing into your myQNAPcloud portal with "QID", a unique ID for you to access your Turbo NAS and securely share your private data and files.

### Web-based file management

The myQNAPcloud portal enables you to manage multiple Turbo NAS units in one place. With the easy-to-use management interface, you can simply download, move, and copy files on your Turbo NAS, lessening the difficulty in accessing multiple Turbo NAS servers. All you need is to sign myQNAPcloud.

### Trustworthy file protection

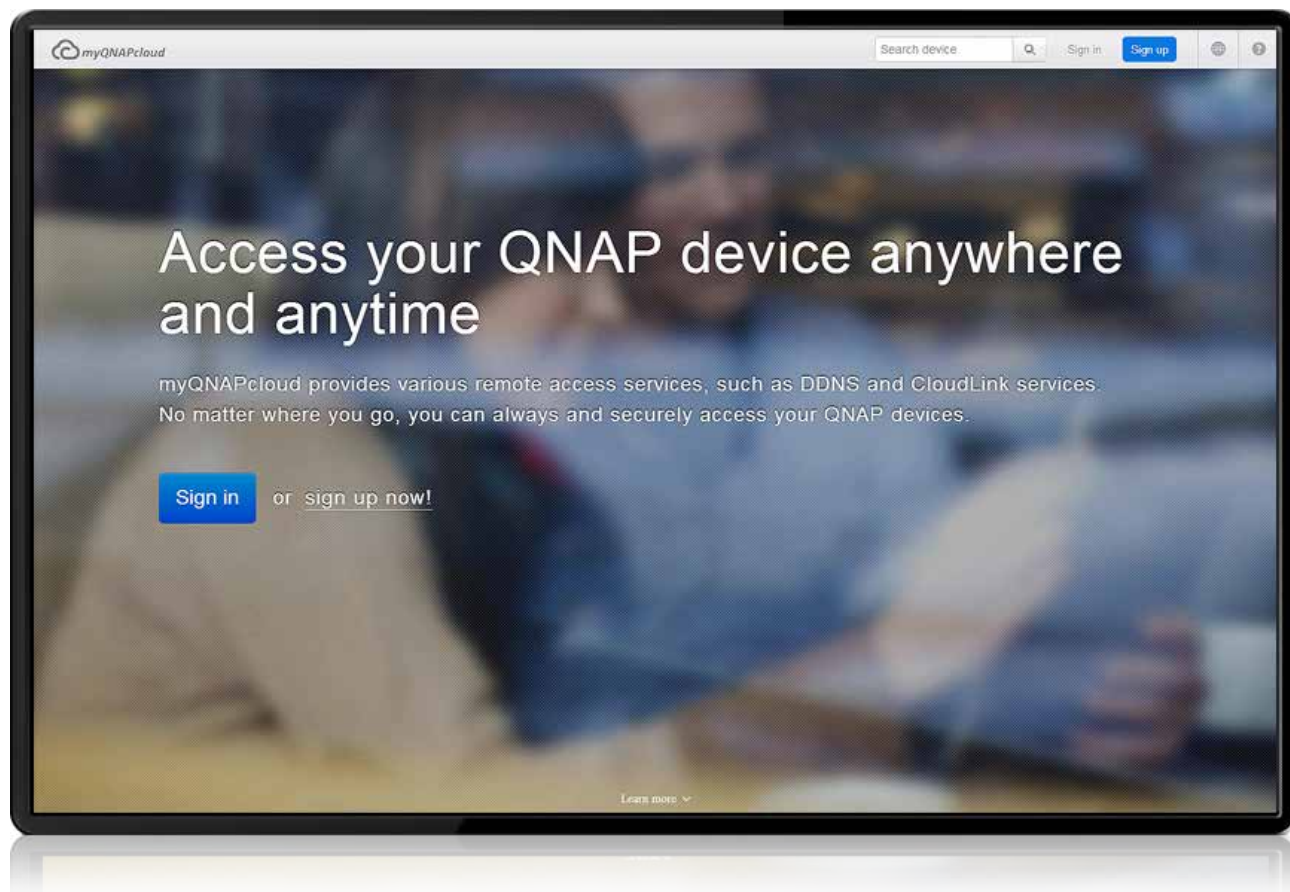
To ensure the security of remote access service, myQNAPcloud strengthens keys on SSL Certificates to 2048-bits. The files on the Turbo NAS are 100% under the NAS owner's control.

### Publish and share

myQNAPcloud is an easy-to-setup service that simplifies the steps in publishing Turbo NAS contents over the Internet. On QTS myQNAPcloud, you can select numerous web-based Turbo NAS services, such as Photo Station, Music Station, and File Station to be published to the myQNAPcloud.com website. Likewise, you can easily view friends' public services on myQNAPcloud.com website too.

### myQNAPcloud Connect

myQNAPcloud Connect application is designed for Windows PC users. By installing the myQNAPcloud Connect, users will be able to connect to the Turbo NAS and easily manage files by drag-and-drop within the Windows Explorer.





## Dropbox-like file synchronization

QTS Qsync utility provides file synchronization feature similar to Dropbox, with even larger storage capacity. You can easily upload files in one place and access from multiple devices, and share files with different groups flexibly and effortlessly.

### Cross-device synchronization

The Turbo NAS is your data center for photos, documents, videos and any file. Any newly added file to the Qsync folder will be automatically accessible on your computers, notebooks, smart phones, tablet devices, or File Station. You can easily enjoy the flexible file access, and the storage capacity is bigger than Dropbox.

### Team folders sharing

You can create sub-folders within the Qsync folder, and share each with different groups of Turbo NAS users as a file exchange center. Everyone in the same sub-folder is always kept up-to-date with the latest version of the files.



### Flexible ways for sync

You can select different sync modes and the shared folders to sync. It effectively decreases the storage consumption and solves the problem of limited space provided by computers.



### Auto-upload from mobile devices

Enable the auto-upload function of the Qfile. Whenever you take new photos or videos, the Qfile will automatically upload the files to the Turbo NAS. It works as a real-time backup of your precious photos and videos.



# Multimedia Center

QTS Photo Station, Music Station and Video Station provide intuitive user interfaces to simplify the multimedia applications and make them more fun. All the multimedia files are safely stored and classified to be easily shared, even being shared via social networking sites. You can use the powerful Download Station to enrich your video collections and have more fun.



## Photo Station

QTS Photo Station helps you archive your life and memories, easily manage, and quickly share with the easiest way. The unique Private Collections safeguard your private photos with the highest level of protection.



### Centralized management

No matter by drag-n-drop uploading or by Qsync synchronization, all the photos, including RAW photos, can be centrally managed via the Photo Station.

### Convenient virtual albums

Freely drag and drop photos from your photo gallery to arrange various virtual albums. These virtual albums are convenient for you to enjoy photos in an organized way and make them easier to share. Feel free to create as many virtual albums as possible as they don't take up additional storage space.

### Review photos on Google Maps

You can use the geo-tagging function to pinpoint the locations of the photos on Google Maps to identify where the photos were taken. In each photo album, you can review the history of your photos on Google Maps to rediscover your path around the world.

### Preview by video thumbnails

You can quickly identify the video content by the dynamic thumbnails\* without opening the videos.

### Private collection

You can create albums in the "Private Collection" to archive private photos. Whenever accessing the private albums, the user account and password are required. Your private photos and videos are well protected.

### Edit photo information

You can add tags or descriptions to the photos for easy searching. For those photos taken by traditional cameras without shooting dates, you can select multiple photos at one time to adjust the dates, making those photos presented in the timeline too.

### Play by slideshows

View the photos by slideshow with dazzling transition effects. Turn on the background music to add more fun while enjoying the photos.

### Group photo sharing

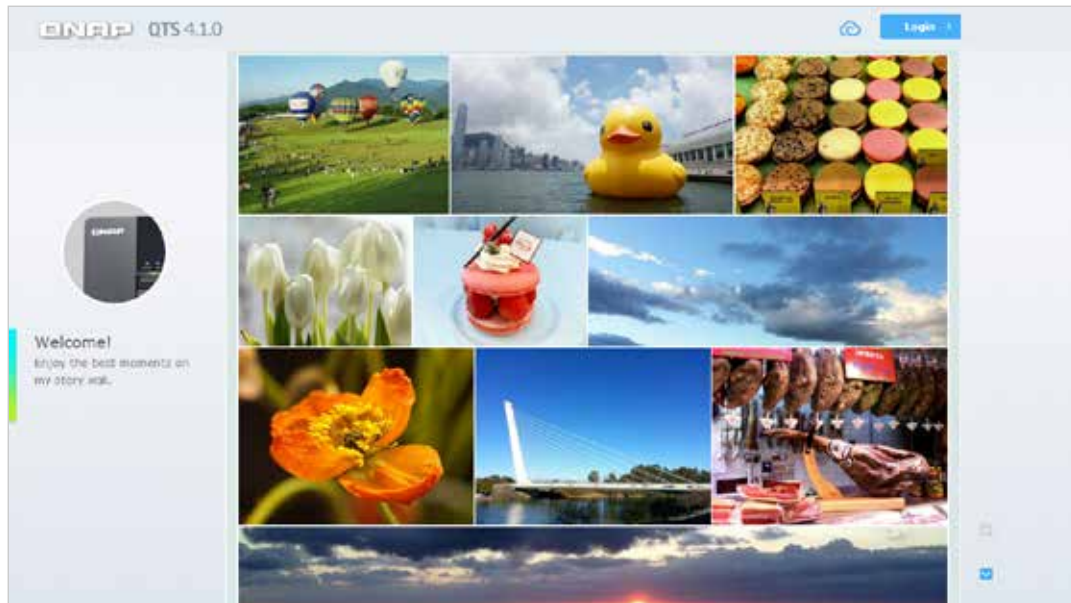
Just arrange the sub-folders in the Qsync folder as Team Folders, and move photos to the Team Folders, people with access right to the Team Folders can browse those photos in their Photo Station.

### Personalized photo wall on login screen

You can share your public photos as a photo wall on the login page, so every time when you log on your Turbo NAS, you will start with happy memories from your photo collection.

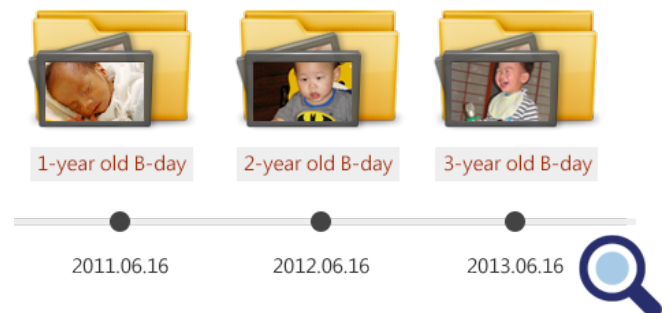
### Preview by timeline

All the photos are organized by the timeline. Adjusting the thumbnails size and rotating photos are acceptable. You can select multiple photos at a time to manage or play with the slideshow.



### Smart photo albums

You can create smart albums of photos by your predefined criteria such as dates and tags. The smart photo albums automatically collect photos with the same dates or tags. It's easier and more fun to browse through memories and organize photos. For example, show the photos taken on this day in history, and make an album for your anniversary that collects each anniversary moments in years.



### Log on with Facebook account

You can bind with social networking sites for your friends to log into the Photo Station and browse shared albums with their Facebook accounts.

### Social network sharing

You can choose multiple photos at a time to share on social networking sites such as Facebook, Google+, Twitter, Pinterest and Plurk.



\* Animated video thumbnails are supported by x86 Turbo NAS models. Non- x86 Turbo NAS models provide static video thumbnails.



## Music Station

Build a home music center easily and enjoy your music collection on the go. Your Turbo NAS is your music center in the cloud.

### Organize huge music collection

You have 4 ways to browse the music collection, and can create max. 200 playlists to enjoy and rate each song. The highest rating titles will be added to "My Favorites" collection.

### Personal music cloud

The Music Station allows you to play stored music on PC and mobile devices via the Internet, acting as your personal music cloud. With the Internet, you can enjoy the terabytes of music on the Turbo NAS anywhere.



### Sing along with lyrics

You can enter the lyrics of each song, and feel free to sing out loud when listening to your music collection on the Turbo NAS.

### Thousands of Internet radio stations

With the built-in TuneIn radio, you can listen to thousands of local and global online radio programs. You can also add new radio stations manually.

### Share your taste of music

Simply choose the music to share, and enjoy the flexibility of being able to share it via email, a download link, or social networking sites such as Facebook, Google+, and Twitter.

### Audio output

Want to enjoy the music on the Turbo NAS with a USB speaker? Just set the "NAS audio output" and enjoy the fantastic music playing.







## Video Station

QTS Video Station is your personal video library with more friendly functions to enhance your video experience. Now, organizing video collections becomes much easier, and sharing videos more fun!

### Build a personal video website

The Video Station is great for archiving and playing your personal video collection online. Just upload videos, and the Video Station will smoothly play the video with appropriate resolution according to the available bandwidth environment.

### Easily classify your videos

You can classify your videos into categories such as home videos, movies, TV shows, and music videos. You can also manually adjust the classification by individual videos.

### Movie information sourcing

You can right click the videos classified as movies, and look up the information automatically obtained from the Internet, such as director and cast member. You can also manually modify the movie title to re-obtain the movie information.

### Organize by tags and labels

Use video tags to efficiently manage video collection using words, rating, and color labels. It's also convenient to collect videos by categories and labels. Archiving and browsing your personal video collection online is easy.

### Smart collection

You can create a smart collection of videos that match your predefined criteria such as names and ratings. The smart collections automatically collect videos with the same criteria, making it easier to find the videos you want to watch.

### More fun with sharing

Video sharing is easy on the Video Station. Simply choose the video and share via email, social networking sites such as Facebook, Google+, and Twitter or a sharing link.



## TV Station\*

Enjoy the combination of digital TV and QNAP Turbo NAS.

### Share digital TV resource

Just insert the compatible DVB-T USB TV tuner to the Turbo NAS, and then you can log on the TV Station web interface to watch or record digital TV shows immediately anywhere in the house. While it's web-based, family members can all watch online or recorded digital TV shows on the Turbo NAS simultaneously.

### Simultaneously watch and record

Never miss any TV show again. Up to 2<sup>#</sup> USB TV tuners are supported so that you can enjoy a TV program while recording another program at the same time.

### Schedule to record

The TV Station supports TV program scheduled recording with the provided over-the-air EPG (Electronic Program Guide)+. Through the list of TV channels with the time frame shown beside, you can easily switch the recording button to start recording and vice versa. Reviewing the recording list is also possible that you can add or delete recording programs anytime.

\* DVB-T reception is not available in every country. Visit [http://www.dvb.org/about\\_dvb/dvb\\_worldwide/](http://www.dvb.org/about_dvb/dvb_worldwide/) to check whether DVB-T is available in your region. + The availability of TV channels and EPG varies according to different regions and areas. # Only x86 models support 2 TV tuners.



## Download Station

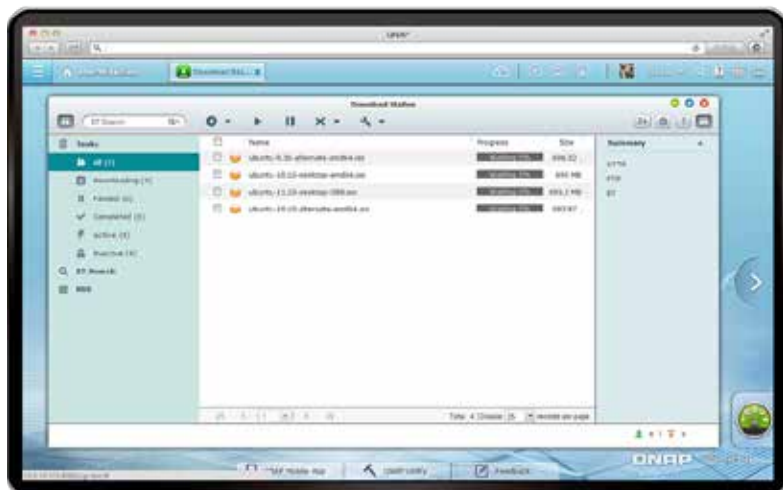
The Download Station provides offline download so you can shut down your PC after configuring download tasks. The Turbo NAS will go on downloading even without your PC on. It is energy-saving and eco-friendly.

Your 24/7 download center

Once you finish managing download tasks, just turn off the computer. The download tasks will keep going until they are finished. Easy, and power-saving.

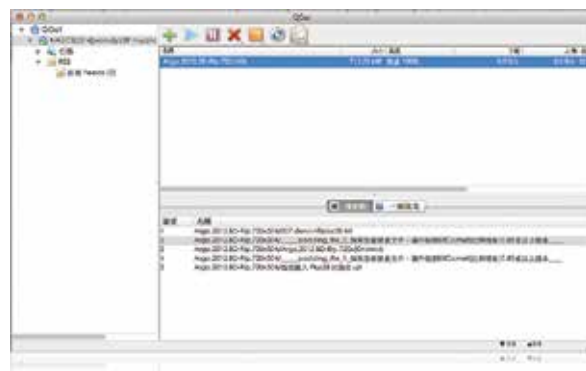
Wide range of download types

Supports BT, PT, Magnet, FTP/FTPS and HTTP/HTTPS downloads, as well as RSS download.



## QGet for remote download tasks management

You can manage download tasks of the Turbo NAS even you are away from home. QGet is available for Windows and Mac computers, and can connect multiple Turbo NAS units to search, add, remove or watch BT download through the Internet. QGet supports intuitive drag and drop of torrent files, HTTP or FTP URL to the software interface for convenient adding of download tasks.



## HappyGet

Easily back up online videos

Found so many interesting videos online and want to archive them? The HappyGet, a third-party app available in the App Center, helps easily back up YouTube and Vimeo videos and Facebook photos to the Turbo NAS.

Download files in the playlist in one click

As the playlist on the video sharing site contains multiple videos, you can easily download all the videos with single click, saving lots of time to click one by one.

Music playlist playback

HappyGet supports music playlist. The playlist of music archived through HappyGet is provided immediately for easy overview and playback. You can also download the files from the playlist to the computer conveniently.

Ringtone editing

HappyGet includes HappyCut function to easily choose a song, and cut it to a preferred length and section or a ringtone for iOS® and Android™ devices. Customizing personal music or ringtone is just that simple!

# Home theater entertainment

You can enjoy the multimedia content stored on the Turbo NAS with a TV, using the feature of HDMI, DLNA and AirPlay.



## AirPlay support

### AirPlay

You can use the Qfile app on an iOS device to browse videos and photos stored on the Turbo NAS and play on the TV via AirPlay-enabled devices such as Apple TV.

### QAirplay

Available in the App Center, QAirplay allows you to stream your media content directly on TV via Apple TV. The media contents are streaming on Apple TV, bypassing your mobile device, thus saves the energy of your mobile device.



## DLNA

### Media streaming and playing

You can use DLNA-compatible devices such as TV, HDTV, Smart TV sets, Sony® PS3, Microsoft® Xbox 360 and Hi-Fi system to enjoy HD quality videos stored on the Turbo NAS.



## HD Station

### Full HD movie experience

With the built-in HDMI port and the XBMC media player, the HD Station\* allows you to easily enjoy video, photo and music collections stored on the Turbo NAS, and have a wonderful family time.

### Surf the Web on TV

The HD Station supports Google Chrome browser. You can surf the Internet or visit social networking sites to gain more fun, or download from the Internet and save files in the Turbo NAS directly.

### Enjoy YouTube on TV

The HD Station allows you to play YouTube contents directly on a big TV. Just sit on the sofa, kick back and enjoy the wonderful TV entertainment!

### Turn you mobile into a remote

Android & iOS device users can download and install the Qremote app from App Store to control the HD Station and the playback of videos, music and photos stored in the Turbo NAS remotely. iOS® and Android™ users can download Official XBMC Remote app to turn the mobile devices into a remote control too.

\* Supported by specific Turbo NAS models





# Surveillance Station

The Surveillance Station is professional network surveillance Video Management System (VMS). Being one of the Turbo NAS standard applications, the Surveillance Station can be activated on the QTS App Center to turn the Turbo NAS into a professional Network Video Recorder (NVR) system for real-time monitoring, recording, playback, alarm notifications, Intelligent Video Analytics (IVA), and management to safeguard your assets and property when used with supported IP cameras.



## The most professional NVR system

### Wide range of supported IP cameras

The Surveillance Station is compatible with over 2,100 IP camera models of over 90 brands and ONVIF specifications, including those support advanced features such as multi-streaming and fisheye-dewarping.

### Comprehensive Turbo NAS product spectrum

The Turbo NAS comes in a full range of product spectrum from single-bay to 24-bays. Each model offers 2 or 4 free IP camera channels, and can be expanded to 8, 16, 24, 40, or 72 channels depending on models, fulfilling all kinds of surveillance deployment needs.

### Cross-platform support

The Surveillance Station works with all major web browsers such as Google Chrome, Mozilla Firefox and Internet Explorer. With QNAP Surveillance Client for Mac, users can also enjoy a similar experience on their Macs.

### Advanced RAID storage technology

The Surveillance Station is installed on the Turbo NAS platform and is protected against loss, theft, and damage of recorded videos with the help of QTS security features and RAID technology.

## Advanced Recording

### High-quality codec recording

The Surveillance Station supports H.264, MPEG-4, M-JPEG, and MxPEG recording, ensuring high-quality recording videos for future playback and reference.

### Manual recording

On the Live-view panel, you can click the record button to start recording the live camera feeds and click the stop button whenever you want to finish recording. Manual recording helps you to capture critical moments on a real-time basis.

### Smart recording

Smart recording intelligently records standard resolution videos in regular recording, and switches to high resolution automatically when alarms are triggered. This greatly saves your cost spent on hard drives and provides you with high resolution video evidence when needed.

## Live-view

### Various remote monitoring modes

The Surveillance Station supports various monitoring modes to display 1, 4, 6, 8, 9, 10, 12, 16, 20, 25, 36, 42, and 64 channels on a single screen. Users can also choose to sequentially display each channel or use dual displays to have a wider view.

### PTZ (Pan/Tilt/Zoom) control

On the Surveillance Station web interface, you can directly adjust the PTZ (Pan/Tilt/Zoom) functions of supported cameras, greatly enhancing the convenience in remote monitoring of desired corners.

### Instant playback

On the Live-view page, whenever you want to look back to check suspicious events of a camera channel you just missed, just hit 'Instant Playback' button to bring up the window to review recent feeds.

### Visual aid by E-map

Just upload the pictures of the monitoring locations to the Surveillance Station and drag and drop the IP camera icons to the right place on the E-map. Once an alarm event happens, the camera icons will flash to indicate the event type for you to be alerted immediately and take necessary actions.

### Instant notification

When the alarm recording is enabled and an event occurs, an alarm icon will be shown instantly on the monitoring page. The alert details can be viewed by clicking the icon.

### Scheduled recording

With the intuitive drag-n-drop scheduled recording panel, you are able to define the time to record feeds for each IP camera, allowing you to flexibility set up a suitable recording plan with your existing storage capacity.

### Alarm recording

The alarm recording will only be triggered when motion detections and camera input events occur, ensuring the critical events are properly saved for future use.

## Playback

### Preview recordings by thumbnails

You can move the mouse cursor over the timeline to preview the video thumbnails to quickly identify and search the event. No need to play the video from the start and wait long just to find a short video clip.

### Intelligent Video Analytics (IVA)

IVA is an advanced way to quickly search videos corresponding to particular modes, greatly saving the time & effort of manually screening out matching videos. IVA includes motion detection, foreign object, missing object, out-of-focus and camera occlusion.

### Real-time watermarking

The support of digital watermarking helps prove that the exported videos and snapshots are genuine without any falsification. The Watermark Proof utility developed by QNAP can verify the credibility of the exported videos and snapshots by showing the exact recording date and time, camera name and the Turbo NAS model name. This is rather useful when the videos could be raised as evidence in a relative investigation or in court.

### Playback and speed control by shuttle bar

With the speed control shuttle bar, you are able to fast-forward the video playback by dragging the button to the right and rewind to the left at the speed you like, helping you quickly find the desired screenshots.



## Flexible Management

### Flexible camera access control

You can create up to 32 user accounts on the Surveillance Station and flexibly assign them to different user groups with different rights for monitoring, playback, PTZ control, and audio monitoring.

### Expendable license management

The Surveillance Station comes with at least one free IP camera license for each Turbo NAS by default. Administrators can expand the channel number based on demands by purchasing additional licenses. This provides a flexible and cost-effective way of scaling the surveillance needs.

### Advanced event management

The system starts alarm recording when alarm events occur. Administrators can configure events and assign 7 types of event actions, including recording, PTZ Control, alarm output, email notification, SMS notification, buzzer notification, and user-defined actions, ensuring to be alerted immediately.

### Manage large-scale camera

By connecting multiple Turbo NAS units, you can manage, monitor and play back up to 128 IP cameras managed by the Turbo NAS at the same time from a single unit.

Low resolution stream



High resolution stream



## Mobile apps

### VMobile – Anytime anywhere surveillance

The VMobile mobile app enables you to monitor the Surveillance Station anytime and anywhere using iOS and Android devices. It provides camera live-view, PTZ control, instant event notifications, video snapshot, video playback, and video search by date and time.

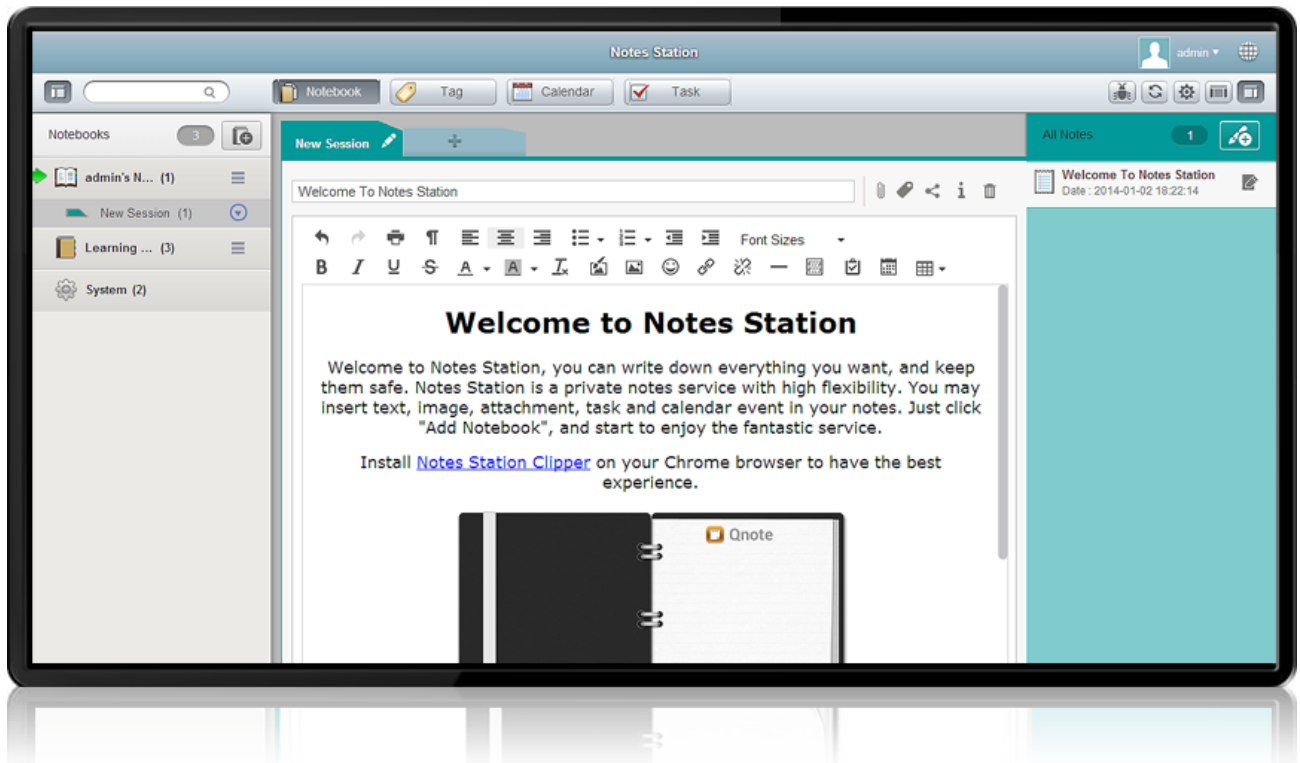
### Vcam – Turn your mobile device into camera

The Vcam mobile app can turn your mobile device into a network camera. With the Vcam mobile app, you could record any moment around you to your Turbo NAS, saving the budget of expensive IP cameras.



# Notes Station

QNAP Notes Station enables you to create digital notes on the private cloud provided by the Turbo NAS. You can also easily leverage the rich files, photos, music and video collection stored on the Turbo NAS to enrich your notes. With the Notes Station, your digital memos are safely kept for instant access.



## Effortless note-taking

You can easily insert all kinds of files stored on the Turbo NAS as part of your notes or as attachment to enhance the content. Even better, the Notes Station Clipper for Chrome extension allows you to flexibly grab online content.

## Easy collaboration and sharing

Flexible privilege settings are provided to help build an environment that you can work together with friends and colleagues. You can also publish the notes on social networking sites quickly to reach more viewers.

## Take full control over your private notes

The Notes Station preserves your notes on the private cloud provided by the Turbo NAS. All your notes are under your full control with maximum privacy.

## Rich in content, organized in layout

You can edit your notes freely with the rich-content web editor and the inbuilt ImgEdit online editor. The notes are presented in a well classified layout and with the to-do list and calendar gadgets, it's quick to find the information you want.

## Take meeting minutes more efficiently

Several meeting minute templates are available. Thanks to the large storage capacity and security of Turbo NAS, it's especially advantageous for archiving confidential business materials.

## Access and edit notes anywhere & anytime

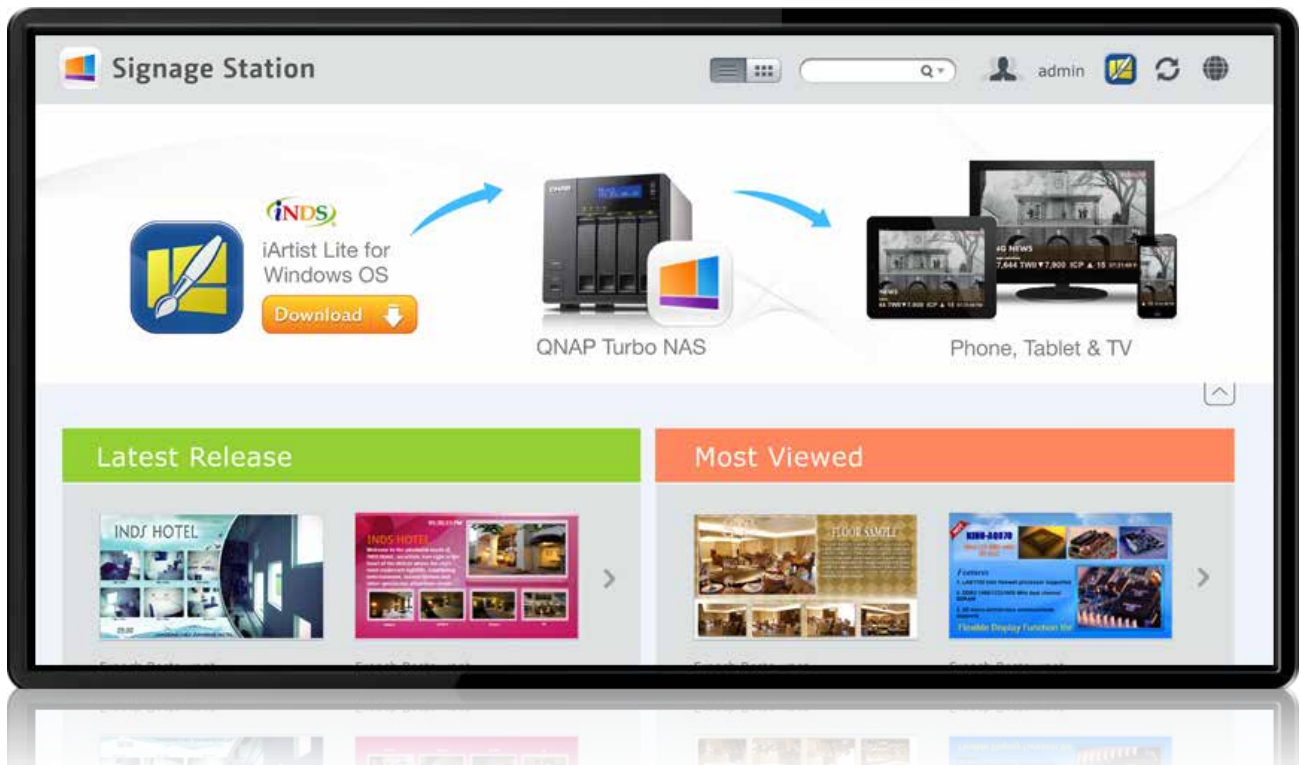
Accessible from multiple platforms including Windows®, Android™ and iOS® devices. You can conveniently access and edit your digital notes on your computers, mobile phones or tablet devices at anytime, anywhere.





# Signage Station

The Signage Station is a free app for the Turbo NAS, allowing shop owners to create menu boards, advertising posters, or business profiles by themselves, and easily display the eye-catching works on tablet devices to attract more customers.



## Drive business growth, increase revenue

Your designed contents can be presented on a web browser. When on the go, you can even show business profile, business cards or product catalogs on smart phones or tablet devices, and share on Facebook. The Turbo NAS with the Signage Station is your ideal tool to present creativity and drive business growth.

## Absolutely easy-to-use

iArtist Lite provides drag-and-drop user interface that allows you to flexibly embed videos, marquees, pictures, and PowerPoint slides on the canvas panel. With the layer-concept playlist and timeline features, you can freely arrange the order of media objects. Moreover, iArtist Lite offers numerous templates for various business types and scenarios, saving you lots of time and effort. Useful widgets such as audio, clock, RSS are available to add to the designed content.

## Instantly publish, and conveniently revise

With iArtist Lite, you can save designed contents as different projects, and upload to multiple Turbo NAS with the Signage Station installed. Whenever you want to revise the content, just open iArtist Lite to update and publish instantly. You can fully control all the content in a timely way.

## Collaboration increasing efficiency

The original design contents can be saved in local computer or the Turbo NAS with the help of the connection wizard. Content saved on the Turbo NAS are accessible for all authorized users. It helps increase work efficiency in projects involving multiple members.

# App Center & Development Platform

Extend the functionality of the Turbo NAS to enrich your work and recreation life. QTS App Center provides various apps for you to install on demand, enjoying more applications and lowering the cost of purchase.

## Powerful and, rich-in-content

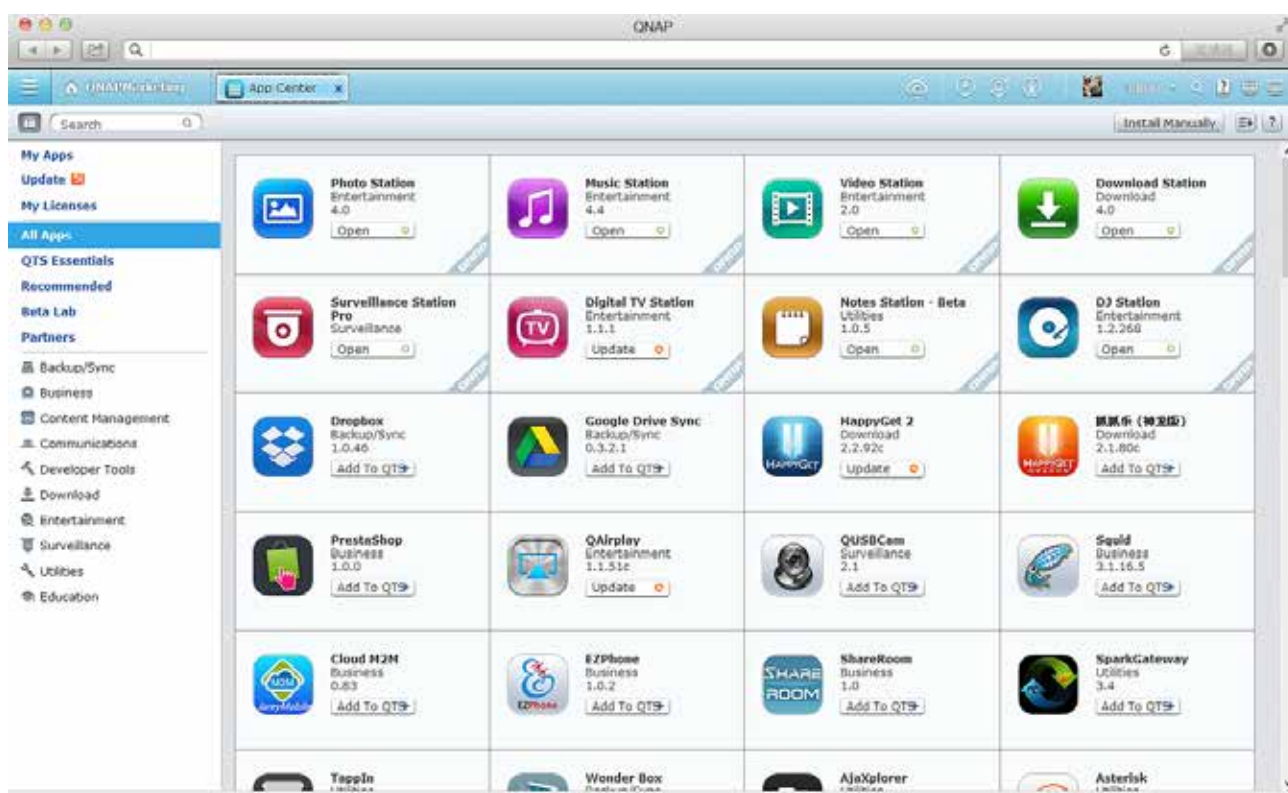
The App Center provides more than 100 add-on apps, including backup/sync, business, content management, communications, developer tools, download, entertainment, surveillance and utilities.

## 1-click Install on demand

Find what you need and install it immediately with just one click.

## Upgrade reminder

Once your installed apps have upgrade version, an upgrade reminder will show on the QTS desktop to help keep your NAS applications up-to-date.



## 3<sup>rd</sup> party Development Platform

The open-source Linux kernel of the QTS makes it a friendly development platform with features including RAID technology, backup security and cloud storage, allowing software developers to develop all kinds of applications. Coupled with rich applications of QTS and the leading Turbo NAS hardware design, developers can enjoy the much more efficient process for R&D.



## QNAP NAS App



Photo Station



Music Station



Video Station



Download Station



Surveillance Station



TV Station



Notes Station



HD Station



DJ Station



Multimedia Station

## Backup / Sync



HiDrive - Beta



Wonder Box



Google Drive Sync



Dropbox



BitTorrent Sync

## Business



osCommerce - Beta



Cloud M2M



Magento - Beta



GLPI



EZPhone



eyeOS

## Content Management



BIGACE - Beta



CMS Made Simple



Concrete 5



DokuWiki - Beta



Dolphin - Beta



Drupal

## Communications



phpFreeChat



XMail



Xeams

## Developer Tools



Python



Optware IPKG



Git



Node.js



Mono



Mantis - Beta

## Download



NZBGet



MLDonkey



aria2



Headphones - Beta



HappyGet 2



Download Station

## Entertainment



Multimedia Station



Logitech Media Server



DJ Station



IceStation



Gallery



DVBLink TV Server - Beta

## Utilities



AjaXplorer



Feng Office - Beta



eTicket



eFinder



Collabtive



Asterisk



# Mobile Apps & Utilities



## Mobile Apps Enjoy mobile life anytime, anywhere

### Qfile



#### Access files conveniently

Upload, access, zip/unzip, move, copy, rename or delete files on the Turbo NAS with your mobile devices, without computer required.

#### Stream multimedia contents

Browse and play the music, photos and videos on the Turbo NAS. No more worries about the space limitation of your mobile device.

#### Auto-upload photos

Automatically upload photos to your Turbo NAS whenever you take new photos. It works as a real-time backup of your precious photos.

#### Offline file reading

Download documents, photos or music from the Turbo NAS to your mobile devices for offline reading.

#### Folder & file sharing

Create download links for shared folders or files to share via email or SMS. You can also share by email as attachments.

### VMobile



#### Mobile surveillance with ease

VMobile is a professional surveillance mobile app for remotely managing the Surveillance Station of linked Turbo NAS or the IP cameras of VioStor NVR.

#### More advanced functions

Besides real-time monitoring, the VMobile allows you to remotely control the recording, snapshots, and playback. Once alarm events occur, an instant notification is also provided.

### Qmanager



#### Manage multiple NAS units

Add multiple Turbo NAS units on Qmanager, and conveniently manage anyone of them anytime and anywhere.

#### Monitor system status

Monitor your system information, such as CPU usage, memory usage, system event information online users, etc. You can also check connection status to prevent suspicious invasion.

#### Remotely manage

With one click, you can use Qmanager to turn on/off or restart the Turbo NAS, open or close Turbo NAS services, and set up Wake on LAN.





## Qremote



Mobile phone as remote control

Coupled with the HD Station, the Qremote app turns your mobile device into a remote control.

Switch among applications

Enjoy the convenience of switching among applications including XBMC, YouTube, Google Chrome, and MyNAS (Turbo NAS web portal) with ease.

## Qmusic



Play music on demand

Easily connect to the Turbo NAS and play the music collection with simple operations. It's 1-2-3 to have a mobile music box!

Play music offline

Click the "Download" button to instantly download music on the Turbo NAS to your mobile device for offline listening. The music never stops even when the Internet is not available.

Enjoy music with one click

4 ways to play the music immediately: Random song, Random playlist, My favorite, and Recently added.

## Qget



Download files on the go

With the inbuilt Internet browser, you can add tasks with a direct download link (HTTP/FTP/Magnet link) to the Download Station.

Back up videos from video sharing sites

With a simple tap, you can back up YouTube videos to the Turbo NAS through the HappyGet.\*

BT search

Search desired torrent files in a few seconds and add them to the Download Station.

Manage download tasks

Quickly overview the status of all download tasks, or remove any unwanted task.

Instant notification

When a download task is complete, you will receive a notification from Qget.

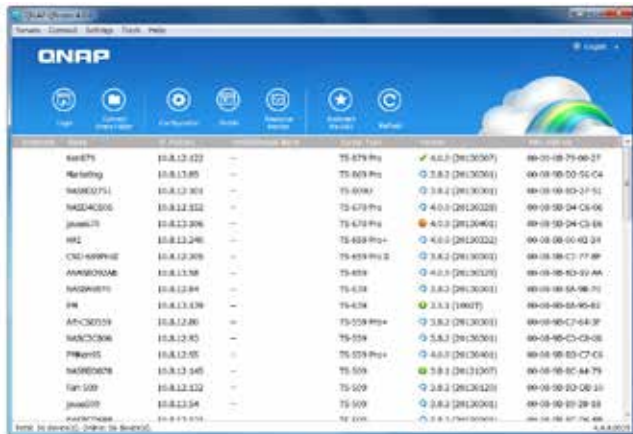
\* The HappyGet, a 3<sup>rd</sup>-party software, is available in the QTS App Center.

# Utilities

Work efficiently and manage the Turbo NAS smartly with the various easy-to-use and practical utilities.

## Qfinder

Qfinder is available for Windows, Mac, and Linux users to quickly find and access the Turbo NAS over the LAN. You can also update the firmware or set up Wake on LAN through the Qfinder.



## myQNAPcloud Connect

myQNAPcloud Connect is designed for Windows PC users to connect to the Turbo NAS and easily manage files by drag-and-drop within the Windows Explorer.



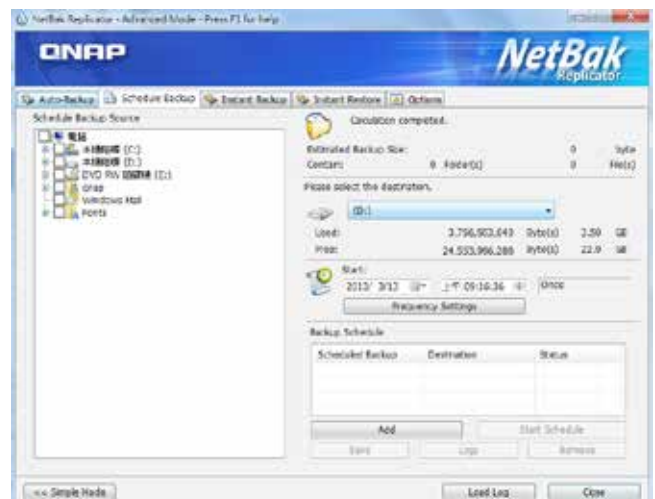
## Qsync

Qsync provides cross-platform synchronization. It creates a specific "Qsync folder" in your devices that you can simply drop files in, and synchronizes the files to all your devices linked to the Turbo NAS.



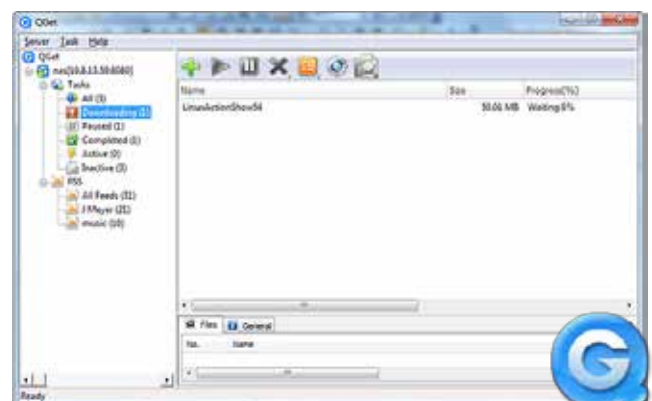
## NetBak Replicator

QNAP NetBak Replicator helps you easily back up files or the entire hard drive data from Windows PC to the Turbo NAS. It also supports backing up to a remote server via FTP and WebDAV through the Internet.



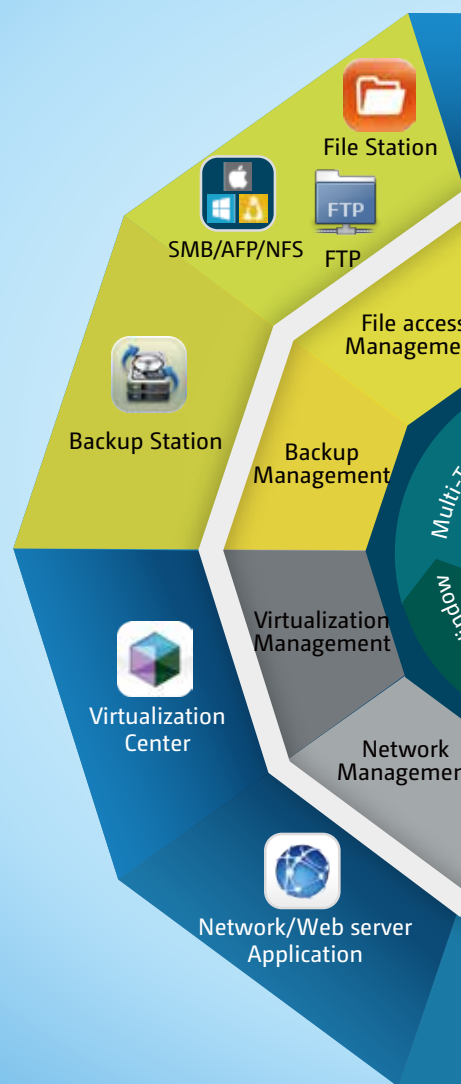
## QGet

QGet is a powerful utility for download management. The software is available for Windows and Mac computers, allowing the management of BT, HTTP, and FTP download tasks of Download Station on multiple Turbo NAS servers. Coupled with the Qget mobile app, you can manage Download Station and HappyGet more flexibly.



# QNAP Product Lineup

Enterprise	<div><div>TS-EC879U-RP</div><div><div>SS-EC2479U-SAS-RP</div><div>SS-EC1879U-SAS-RP</div><div>SS-EC1279U-SAS-RP</div><div>TS-EC1679U-SAS-RP</div><div>TS-EC1279U-SAS-RP</div><div>TS-EC1279U-RP</div><div>TS-EC1679U-RP</div></div></div>
SMB (High-end)	<div><div><div>TVS-470 Pro</div><div>TVS-670 Pro</div><div>TVS-870 Pro</div><div>TS-879U-RP</div><div>TS-1279U-RP</div><div>TS-1670U-RP</div><div>TS-670-Pro</div><div>TS-879 Pro</div><div>TS-1079-Pro</div><div>TS-870U-RP</div><div>TS-1270U-RP</div><div>TS-470</div><div>TS-670</div><div>TS-870</div></div></div>
SMB (Middle-end)	<div><div>TS-469U-RP/SP</div><div>TS-869U-RP</div><div>TS-1269U-RP</div><div>TS-269 Pro</div><div>TS-469 Pro</div><div>TS-569 Pro</div><div>TS-669 Pro</div><div>TS-869 Pro</div></div>
SMB (Entry-level)	<div><div>TS-121</div><div>TS-221</div><div>TS-421</div><div>TS-421U</div></div>
Work Group/ SOHO/Home (High-end)	<div><div>TS-269L</div><div>TS-469L</div><div>TS-569L</div><div>TS-669L</div><div>TS-869L</div></div>
SOHO/Home (Middle-end)	<div><div>TS-120</div><div>TS-220</div><div>TS-420</div><div>TS-420U</div><div>HS-210</div></div>
Home (Entry-level)	<div><div>TS-112P</div><div>TS-212P</div></div>



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